

Title (en)

METHOD OF RECYCLING THERMOSETTING POLYMER OBJECT OF ARBITRARY SHAPE

Title (de)

VERFAHREN ZUM RECYCLING VON WÄRMEHÄRTBAREM POLYMEROBJEKT MIT BELIEBIGER FORM

Title (fr)

PROCÉDÉ DE RECYCLAGE D'OBJET POLYMÈRE THERMODURCISSABLE DE FORME ARBITRAIRE

Publication

EP 3815867 A1 20210505 (EN)

Application

EP 20204484 A 20201028

Priority

- TW 108139521 A 20191031
- TW 109136255 A 20201020

Abstract (en)

A method of recycling a thermosetting polymer object (5) of arbitrary shape includes: operating a fixture device (2) to hold and rotate the thermosetting polymer object (5); operating a smart and modularized water jet cutter device (3) to shatter the thermosetting polymer object (5) outside-in into a wet polymer powder; drying the wet polymer powder; flattening the partially dried wet polymer powder; completely drying the flattened wet polymer powder; and separating the dried polymer powder into first and second groups, the particle size of the first group dried polymer powder being greater than a predetermined value, the particle size of the second group dried polymer powder being not greater than the predetermined value.

IPC 8 full level

B29B 17/04 (2006.01); **B02C 19/06** (2006.01); **B26D 7/00** (2006.01); **B26F 3/00** (2006.01); **B29K 105/24** (2006.01); **B29L 29/00** (2006.01); **B29L 30/00** (2006.01)

CPC (source: CN EP US)

B02C 19/18 (2013.01 - US); **B25J 11/0055** (2013.01 - EP US); **B26D 3/005** (2013.01 - EP); **B26F 3/004** (2013.01 - EP); **B29B 17/02** (2013.01 - CN EP); **B29B 17/04** (2013.01 - EP); **B29B 17/0404** (2013.01 - CN EP US); **B29B 2017/0203** (2013.01 - EP US); **B29B 2017/0224** (2013.01 - CN EP US); **B29B 2017/0234** (2013.01 - EP US); **B29B 2017/0272** (2013.01 - CN EP US); **B29B 2017/0428** (2013.01 - CN EP US); **B29K 2105/24** (2013.01 - EP); **B29L 2029/00** (2013.01 - EP); **B29L 2030/00** (2013.01 - EP); **B29L 2030/002** (2013.01 - EP); **B29L 2030/007** (2013.01 - EP); **Y02W 30/52** (2015.05 - EP); **Y02W 30/62** (2015.05 - EP)

Citation (applicant)

TW 361730 B

Citation (search report)

- [A] US 2012223166 A1 20120906 - CHENG PIN-TSUNG [TW], et al
- [A] US 9156192 B2 20151013 - BUTLER ANDY [CA], et al
- [A] WO 0153053 A1 20010726 - REGUM KFT [HU], et al

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WO2023111563A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3815867 A1 20210505; AU 2020260496 A1 20210520; AU 2020260496 B2 20210812; CA 3101534 A1 20210430; CN 112743714 A 20210504; JP 2021070325 A 20210506; PH 12020050429 A1 20210510; US 2021129388 A1 20210506

DOCDB simple family (application)

EP 20204484 A 20201028; AU 2020260496 A 20201029; CA 3101534 A 20201027; CN 202011185656 A 20201030; JP 2020182900 A 20201030; PH 12020050429 A 20201026; US 202017081706 A 20201027